Course Syllabus
BISC 331 Comparative Anatomy of the Vertebrates

Instructor: Dr. Christopher Leary  Office Location: Shoemaker Room 416
Semester: Spring 2020  Office Hours: 10:00-1:00, Mon & Wed
Lecture: Shoemaker Hall Room 303  E-mail: cjleary@olemiss.edu
Lecture times: Tues, Thurs 1:00-2:15  Phone: 915-1087

Laboratory Instructors: Tyler Casada  Lab times: Section 1: Wed 11-1:50
Lab Location: Shoemaker Hall Room 510  Section 4: Tues 2:30-5:20

Overview: Why do vertebrates differ so much in their morphology? For instance, think about the
differences in the anatomy of birds and turtles. How and why did such extreme differences in
anatomy arise? To address these types of questions, we will examine vertebrate form and function
in an evolutionary context. In doing so, we will consider a wide range of topics including
systematics, histology, embryology, physiology, ecology and behavior. Upon completion of this
course, students should be able to integrate various principles, concepts, and themes in order to
understand morphological variation across vertebrate taxa.

Text: “Vertebrates: Comparative Anatomy, Function, Evolution” 5th edition (or more recent

Laboratory manual and materials: “Comparative Vertebrate Anatomy: A Laboratory
Kardong and E.J. Zalisko.

*Purchase a dissection kit.

Attendance: You are responsible for all information and material provided during class.
Attendance is expected and may be recorded each day of class. To comply with attendance
verification requirements, a report of your attendance will be made during the first two weeks of
class.

Exam and quiz make-up policy: Students can make-up missed exams or quizzes only under the
following circumstances: 1) illness with physician documentation, 2) family emergency with
contact person provided, 3) University-sponsored function with written documentation from
sponsoring department. I must be contacted either before the exam/quiz or within 24 hours after
the exam/quiz is given to arrange a time to make-up the exam.

Cell Phones: The use of cell phones during class will not be tolerated. Please turn your cell phone
OFF before entering the classroom.

Academic integrity: In cases involving dishonesty or misconduct, procedures outlined by the
University Academic Discipline Committee will be followed.
<table>
<thead>
<tr>
<th>Date</th>
<th>Text Chapter</th>
<th>Lecture Topic</th>
<th>Lab</th>
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<tbody>
<tr>
<td>Week 1 (Jan 21-24)</td>
<td>1</td>
<td>Introduction: a brief history, general morphological concepts, phylogeny and geological time</td>
<td>Vertebrae, ribs</td>
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<tr>
<td>Week 2 (Jan 27-31)</td>
<td>2, 3</td>
<td>Chordate and vertebrate phylogeny and characteristics</td>
<td>Skull</td>
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<tr>
<td>Week 3 (Feb 3-7)</td>
<td>4, 5</td>
<td>Design: size, shape, biomechanics, biophysics and life history</td>
<td>Girdles, limbs</td>
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<td>Week 4 (Feb 10-14)</td>
<td>6</td>
<td>Integument</td>
<td>LAB EXAM I</td>
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<tr>
<td>Week 5 (Feb 17-21)</td>
<td>7</td>
<td>The skull</td>
<td>Muscle</td>
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<tr>
<td>Week 6 (Feb 24-28)</td>
<td>7</td>
<td>The skull</td>
<td>Muscle</td>
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<tr>
<td>Week 7 (March 2-6)</td>
<td>8</td>
<td>The axial skeleton</td>
<td>Muscle</td>
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<td>Week 8 (March 9-13)</td>
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<td><strong>SPRING BREAK!</strong></td>
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<tr>
<td>Week 9 (March 16-20)</td>
<td>9</td>
<td>The appendicular skeleton</td>
<td>LAB EXAM II</td>
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<tr>
<td>Week 10 (March 23-27)</td>
<td>10</td>
<td>The muscular system</td>
<td>Circulation/ Respiration</td>
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<td>Week 11 (March 30-Apr 3)</td>
<td>11</td>
<td>The respiratory system</td>
<td>Circulation/ Respiration</td>
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<tr>
<td>Week 12 (Apr 6-10)</td>
<td>12</td>
<td>The circulatory/ respiratory systems</td>
<td>Circulation/ Respiration</td>
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<tr>
<td>Week 13 (Apr 13-17)</td>
<td>12</td>
<td>The circulatory/system respiratory systems</td>
<td>Digestive system</td>
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<td>Week 14 (Apr 20-24)</td>
<td>13</td>
<td>The digestive system</td>
<td>Urogenital system</td>
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<td>Week 15 (Apr 27-May 1)</td>
<td>14</td>
<td>The urogenital system</td>
<td>LAB EXAM III</td>
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<td>Week 16 (May 4-8)</td>
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<td><strong>EXAM III: Final Exam</strong></td>
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GRADE DISTRIBUTION

LECTURE
3 Exams (100 points each) ................................................................. 300 points
5 Quizzes (10 points each) ................................................................. 50 points

Total points from lecture: 350

LABORATORY
3 Lab exams (50 points each) ............................................................. 150 points
5 Lab quizzes (10 points) ................................................................. 50 points

Total points from lab: 200

Total course points = 550

Grading Scale: The “plus/minus” grade system is not used in this course. Final grades are calculated based on the percentage of the total points earned.

Final grades: A = 90-100%, B = 80-89%, C = 70-79%, D = 60-69%, F = 59% or less